

Pre Calculus Honors
Unit 4 Lesson 2C Classwork/Homework

Name:
Date:

Find the requested value, using the given information. Drawing pictures will always be helpful.

1. Find the length of the hypotenuse of the triangle if $\theta = 34^\circ$ and the opposite side has length 15.

2. Find the adjacent side of the triangle if $\theta = 57^\circ$ and the opposite side has length 32.

3. Find the hypotenuse of the triangle if $\theta = 39^\circ$ and the adjacent side has length 23.

4. A wire from the top of the transmission tower forms a 75 degree angle with the ground at a 55-foot distance from the base of the tower. How tall is the tower?

5. Kirsten places her surveyor's telescope on the top of a tripod 5 feet above the ground. She measures an 8 degree elevation above the horizontal to the top of a tree that is 120 feet away. How tall is the tree?

6. Mount Fuji in Japan is approximately 12400 feet high. Standing several miles away, you estimate the angle of elevation to the top of the mountain is 30° . Approximately how far away are you from the base of the mountain?

Review: Pick 5. For each, sketch the original angle and then convert to either degrees or radians.

7) 35°

8) 160°

9) 315°

10) 410°

11) 620°

2) 585°

19) $\frac{\pi}{3}$

20) $\frac{\pi}{8}$

21) $\frac{5\pi}{8}$

22) $\frac{13\pi}{3}$

23) $\frac{7\pi}{6}$

24) 8π